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Baker-Polito Administration Awards \$455,000 in Grants to Massachusetts Cleantech Innovators

BOSTON – The Baker-Polito Administration today awarded \$455,000 to seven early-stage researchers and companies developing innovative clean energy and water technologies across the Commonwealth. The funding, which comes from the Massachusetts Clean Energy Center's (MassCEC) Catalyst program, will support research in Amesbury, Boston, Cambridge, Fall River and Lowell.

"The success of our clean energy sector and nation-leading innovation economy relies heavily on supporting promising entrepreneurs from across the Commonwealth," **said Governor Charlie Baker**. "Catalyst funding will accelerate the development of clean energy technology and mitigate the effects of climate change as we work to meet our carbon reduction goals."

"Today's grants will help drive disruptive technologies and ideas to market, creating more business opportunities and jobs across Massachusetts," **said Lieutenant Governor Karyn Polito**. "The Baker-Polito Administration is pleased Massachusetts is home to the innovative and entrepreneurial projects recognized today, and we look forward to working with their teams, the CEC, and local stakeholders to support the development of their products."

The Catalyst program, which is funded by MassCEC and managed by the Massachusetts Technology Transfer Center (MTTC), provides \$65,000 grants to researchers and companies that are working to bring promising products and technologies to the marketplace.

"Supporting innovation in clean energy technology is essential for reducing greenhouse gas emissions across Massachusetts," **said Energy and Environmental Affairs Secretary Matthew Beaton**. "Through this program, we are providing crucial resources to help these young companies bridge critical funding gaps and drive economic activity in the Commonwealth."

"The Catalyst Program provides crucial funding to overcome the hurdles facing early-stage cleantech companies, providing potential for future opportunities for private investment," **said MassCEC CEO Stephen Pike**. "This funding will play a key role in advancing disruptive technologies that have the potential to offer solutions to the Commonwealth's most pressing water and energy challenges."

"Researchers and entrepreneurs need to show early proof that their technology is able to deliver a commercially viable product," **said MTTC Director Abigail Barrow**. "This very early stage funding enables our awardees to do that important task and, as prior awardees have done, then they can raise additional funding to enable them to grow their companies."

Since 2010, the program has awarded \$3.65 million to 83 research teams. Past awardees have raised a combined total of more than \$100 million in follow-on financing from various sources, including angel investors, venture capitalists and grants from federal programs including the U.S. Department of Energy's Advanced Research Projects Agency-Energy, the National Science Foundation and the Small Business Innovation Research program. Previous awardees have formed six new companies, received patents for or filed inventions on 104 new pieces of intellectual property, and issued 58 new research publications.

The following awardees will each receive \$65,000:

Douglas Lamm (Amesbury), Building Envelope Materials: Developing a micro-injection foam technology to make deep energy retrofits an affordable and cost effective option for building owners.

Dr. Patrick Cappillino & Dr. Ertan Agar (Dartmouth & Lowell), University of Massachusetts: Developing a new class of electrolytes for flow batteries in the grid-scale energy storage market.

Dr. Yan Wang (Shrewsbury), AM Batteries: Developing an energy efficient process to fabricate electrodes for lithium ion batteries.

Dr. Michael Gevelber (Boston), Boston University: Developing a new control architecture for HVAC systems that reduces excess airflow and saves energy in commercial buildings.

Dr. Matthew Panzer (Somerville), Tufts University: Developing a flexible, lightweight technology for lithium-ion batteries that is safer to use than conventional technologies.

Emiliano Cecchini (Boston), Sowlis: Developing an off-grid box consisting of a battery, solar panels, and filtration device to provide renewable energy and treated water for remote areas and developing countries.

Karim Khalil (Cambridge), Infinite Cooling: Developing a technology that reduces evaporation water loss from power plant cooling towers.

"Programs like Catalyst offer crucial support to the Commonwealth's clean energy economy," **said State Representative Thomas A. Golden, Jr. (D-Lowell), Chairman of the Joint Committee on Telecommunications, Utilities, and Energy.** "I want to thank the Baker administration and MassCEC for supporting these entrepreneurs and innovators, especially UMass Lowell's cutting edge research in energy storage solutions."

"This funding is not only crucial to strengthening the administration's commitment to clean energy, but to empower those in our community to grow and develop innovative solutions," **said State Representative James Kelcourse (D-Amesbury).**

"As Massachusetts continues to lead in efforts to address climate change through innovation, I am proud of significant advances right in our community by Dr. Panzer at Tufts University," **said State Representative Christine Barber (D-Somerville).** "Investments in this kind of research are critical as we work to reduce greenhouse gases."

"Our community should be pleased on two fronts," **said State Representative Chris Markey (D-Dartmouth).** "First, the intellectual power of our public universities, with Drs. Cappillino and Agar receiving this grant for their highly sophisticated research, and second, that our state is leading by investing in improving our environment through grants for cutting-edge innovation."

"Growing clean and green represents the smart way forward to reduce the Commonwealth's carbon footprint and protect our rich natural resources for future generations," **said State Senator Eileen Donoghue (D-Lowell).** "Led by world-class researchers and students, the University of Massachusetts Lowell performs cutting-edge clean energy work, and I congratulate Dr. Patrick Cappillino and Dr. Ertan Agar for receiving this well-deserved grant."

"I am proud of the Somerville researchers and businesses who are hard at work creating innovative technology that strives to do more to protect us and our environment," **said State Senator Patricia D. Jehlen (D-Somerville).** "I congratulate Dr. Panzer on his achievements, and am happy to see the Commonwealth assisting him in moving forward with his work."

"The Greater Worcester area possesses some of the most innovative, dynamic and successful companies within our Commonwealth," **said Senator Michael O. Moore (D-Millbury).** "I am certainly very impressed by Dr. Wang's dedication to revolutionizing the electrode fabrication process for lithium ion batteries. This grant funding is critical to supporting clean energy research and development in our Commonwealth and I am confident that this grant opportunity will advance AM Batteries' mission of enhancing energy efficiency."

"Supporting growth in our clean energy sector is critical and funding to early-stage cleantech companies and entrepreneurs such as Dr. Yan Wang's AM Batteries of Shrewsbury will bring new products and technologies to market that will support the Commonwealth's commitment to the environment and a stronger economy," **said State Representative Hannah Kane (R-Shrewsbury).** "I am grateful to the Baker-Polito Administration for prioritizing support of these worthy projects across the Commonwealth."

"Through the collaborative efforts of the University of Massachusetts, Dartmouth and the University of Massachusetts, Lowell in developing new battery power technologies, our region and state continue to make great strides in long term alternative energy solutions," **said State Representative David Nangle (D-Lowell).** I applaud Governor Baker and his energy team, along with the Mass Clean Energy Center, in recognizing and prioritizing the needs for our commonwealth to develop these new innovations, and for providing the resources and capital that further enhance our reputation as a national leader in energy research and diversification."

"Emiliano and Karim's developments are emblematic of the Commonwealth's ingenuity in clean-energy solutions," **said State Senator Joseph Boncore (D-Boston).** "With support from these grants, these projects will help to ensure that the communities of the First Suffolk and Middlesex remain business leaders in clean energy technologies."

The funding builds upon the Baker-Polito Administration's ongoing efforts to support the Commonwealth's vibrant clean energy innovation sector. In August 2016, [Governor Baker signed bipartisan comprehensive energy diversification legislation](#) that promotes the administration's commitment to reducing energy costs while strengthening the state's clean energy economy and progressing towards Massachusetts' greenhouse gas reduction requirements.

The Renewable Energy Trust, created by the Massachusetts Legislature in 1998, provides the funding for this program. A systems benefit charge paid by customers of investor owned utilities and five municipal electric departments that have opted into the program funds the trust.